ABSTRACT

A valve actuating apparatus for control of fluid flow that has a housing having a valve body with a first port and a second port that extend through the housing. In one embodiment the valve actuating apparatus also has a toggle valve assembly that includes an armature, at least one sealing surface connected to the armature, and a spring biasing the armature to a first position where the sealing surface closes the first port. The valve actuating apparatus further includes a solenoid assembly with an electromagnetic coil and a pole piece having a first leg and a second leg. The first leg is shorter than the second, and the first leg and the armature define an air gap when the armature is in the first position. The electromagnetic coil creates a magnetic field in the pole piece when it is electrically energized to attract the armature toward the first leg to a second position where the air gap is reduced.